

Claims

1. A method for forming in a production line profiles (50) with a cross-section ~~that~~ varies along the length from a plane metal strip (10) that is unwound from a coil (9), where ~~by~~ edge cutters (14) and a number of roll-forming units (17-24) are used where not only the edge cutters but also the roll-forming units can be displaced individually sideways relative to the strip,

characterised in that

the edge cutters (14) and the roll-forming units (17-24) are individually controlled such that they follow the lines of extent of the side edges (51, 52) that are cut for the corners (53-56) that are subsequently formed, and that the forming of one corner with a number of roll-forming units is begun only after the forming of a corner that lies more closely to the edge of the strip has been completed.

2. The method according to claim 1, **characterised in** that a transverse slit (61, 62) is cut in the

strip (10) in the line before the roll-forming operation, without fully cutting off the strip, and in that a terminal cutter (30) cuts off the strip after the roll-forming operation in order to cut off the trailing end of a profile length manufactured from the strip.

3. The method according to claim 2, **characterised in** that lengths of profile are manufactured

that have different widths of extent at their two ends, whereby the width of the strip is adjusted between one slit (60) that defines the trailing end of one length of profile and a further slit (61) that is cut in order to define the leading end of the subsequent length of profile, and then the strip is cut at both slits in the subsequent terminal cutter (30).

4. The method according to any one of the previous claims, **characterised in** that sections of

the profile sheet are rolled in a pair of rollers (83, 85; 84, 82) to become thinner as the roll-formed profile (50) is fed forwards in the line, such that the profile becomes bent.

5. The method according to claim 4, **characterised in** that the roller gap of a pair of rollers

(83, 85; 84, 82) that roll the plate thinner is varied as the profile (50) is fed forwards in order to control the degree of bending.

6. The method according to claim 4 or 5, **characterised in** that a profile (50) is formed with a

central flange (76) and flanking pieces (77, 79) as the strip (10) is fed forwards in the line and both flanking pieces are rolled thinner at one end of the flanking pieces.

7. The method according to claim 4 or 5, **characterised in** that a profile (50) is formed with a central flange (76) and flanking pieces (77, 79) as the strip is fed forwards in the line and one complete flanking piece is rolled to become thinner.

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8. The method according to any one of claims 5-7, **characterised in** that the positions of the roller pairs (83, 85; 84, 82) are controlled by the profile.
9. A production line for the continuous forming of profiles that have a cross-section that varies along the length from a plane metal strip (10) that is unwound from a coil (9), comprising an unwinder (11), an alignment device (12), a stamp (13) for the transverse cutting of the strip, and an edge cutter station (14) for cutting the edges of the strip, followed by a roll-forming section (17-24), whereby the edge cutter station and the roll-forming unit can be individually displaced and guided in a sideways direction in order to vary continuously the final appearance of the profile (50) that is being manufactured

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- 15 **characterised by**
a bending station (25) after the roll-forming section (17-24), that comprises rollers (35-40) that can be guided to roll sections of the profile (50) to become thinner such that the profile is in this way bent or twisted as it is formed.
10. The production line according to claim 9, **characterised in** that the bending station (25) comprises a pair of rollers (83, 85; 84, 82) on each side of the profile.
11. The production line according to claim 10, **characterised in** that the pairs of rollers are mounted such that they can be displaced, and are connected to means arranged to control the profile (50). *[sv: "att styra på profilen"]*

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12. The production line according to claim 10 or 11, **characterised in** that the bending station comprises two bending units (26, 27), one mounted after the other along the line.